

## AMENDMENT TO THE CLAIMS

Please amend the claims as follows:

1. (Withdrawn-Currently Amended) A computer implemented method for determining relevancy of real time received terms, the method comprising:
  - providing a system to receive and process a real time term, the system comprising:
    - a search engine, adapted to receive and process and receives and processes an information stream and/or an information packet and to provide and provides an indication that reflects at least one match between a query provided by a client and a real time term extracted from the information stream and/or the information packet;
    - a relevancy determination unit, coupled to the search engine, adapted to receive and receives the indication and to determine and determines whether the real time term matches a keyword; and at least one module selected from the group of modules consisting of:
      - a message coordinator module adapted to coordinate and coordinates a handling of a plurality of information packets,
      - a message buffer adapted to temporarily hold and temporarily holds the plurality of information packets,
      - a message filter module adapted to filter and filters a plurality of information packets according to predefined rules,
      - a term extractor module adapted to parse and stem and parses and stems a plurality of information packets,
      - a terms filter adapted to exclude and excludes a real time term according to predefined rules,
      - a queries coordinator module adapted to coordinate and coordinates the processing of a client query,

a query-term extractor adapted to parse and stem and  
parses and stems an incoming query to extract and process and  
extracts and processes an operative query-term, and  
a query-term filter adapted to exclude and excludes a  
specific query-term in a predefined manner,

wherein the relevancy determination unit comprises: a first interface adapted to receive and receives information relating to a reception of the keyword; a processor adapted to calculate and calculates a current reception pattern and a previous reception pattern in response to the reception of information relating to the reception of the keyword and to attach and attaches a relevancy level to the keyword; a storage unit, coupled to the first interface and the processor, adapted to store and stores the current reception pattern, the previous reception pattern and the information relating to the reception of the keyword; and utilizing said system to:

determine the keyword,

extract the real time term from a currently received information stream,

update the current reception patterns of the keyword in response to a comparison between the extracted real time term and the keyword, and

determine a relevancy of the keyword in response to the comparison between the current reception pattern and a reference reception pattern.

2. (Withdrawn) The method of claim 1 wherein the keyword is extracted from an alert criterion of a client.
3. (Withdrawn) The method of claim 1 wherein the keyword is extracted from a client query.

4. (Withdrawn) The method of claim 1 further comprising updating at least one client as to the relevancy of the keyword.
5. (Withdrawn) The method of claim 1 further comprising estimating a flow pattern of the received information stream to generate an estimated flow pattern.
6. (Withdrawn) The method of claim 5 wherein the current reception pattern of the keyword is further responsive to the estimated flow pattern of the received information stream.
7. (Withdrawn) The method of claim 5 wherein estimating the flow pattern comprises monitoring the reception of a flow keyword.
8. (Withdrawn) The method of claim 7 wherein the flow keyword comprises a commonly used word.
9. (Withdrawn) The method of claim 1 further comprising storing the real time term in a storage unit for a predetermined period of time,  
wherein storing the real time term is preceded by a preprocessing step selected from the group consisting of:
  - adding control data to the information packet;
  - filtering the information packet;
  - adding control information to the filtered information packet;
  - extracting the real time term from the filtered information packet;
  - filtering the real time term to generate real time terms; and
  - storing the real time term in a storage unit.
10. (Withdrawn) The method of claim 9 wherein the control data comprises at least one parameter selected from the group consisting of: (i) information packet identification; (ii) information source identification, (iii) time of arrival, (iv) alert identification; and (v) query identification.

11. (Withdrawn) The method of claim 9 wherein the real time term is extracted out of the filtered information packet by parsing and stemming a plurality of information packets; and
- wherein filtering further comprises a step selected from the group consisting of: (a) discarding a term constructed of a one-letter word; (b) discarding a term constructed of a frequently used word; (c) discarding a term constructed of a stop-word; and (d) discarding a term constructed of a predefined word.
12. (Withdrawn) The method of claim 9 wherein a reception of the information packet is followed by the steps of:
- storing the information packet with an associated packet identifier in the storage unit;
- storing a real time term information representative of a reception of the real time term in the storage unit; and
- linking the stored information packet and the real time term information.
13. (Withdrawn-Previously Presented) The method of claim 12 further comprising a deletion of an information packet followed by deleting the linked real time term information.
14. (Withdrawn) The method of claim 13 wherein the information packet is stored in a messages hash, and the linked real time term information is stored in a terms hash.
15. (Withdrawn) The method of claim 14 wherein the real time term information comprises at least one information field selected from the group consisting of:
- a last modification time field, to indicate a most recent time of reception of the real time term during a predetermined period of time;

a number of channels containing term, to indicate a number of information sources that provided the real time term during a predetermined period of time;

a total instances field, to indicate a total amount of receptions of the real time term during a predetermined period of time; and

a terms inverted entries map, comprising a plurality of terms inverted file entries, each entry holds information representative of a reception of the real time term from a single information source during a predetermined period of time.

16. (Withdrawn) The method of claim 15 wherein each inverted file entry comprises at least one field selected from the group consisting of:

a channel identifier, to identify the information source that provided the real time term during a predetermined period of time;

instances number, to indicate a total amount of receptions of the real time term from an information source during a predetermined period of time; and

time of last appearance, to indicate a most recent time of reception of the real time term from an information source during a predetermined period of time.

17. (Withdrawn) The method of claim 16 wherein the information packet is further associated to a message terms key map, comprising a plurality of message characteristic entries, each message characteristic entry associated to a real time term extracted from the information packet, said message characteristic entry comprising at least one field selected from the group consisting of:

a terms inverted file, to point to the term extracted information;

an instance number, to indicate a number of times said real time term appeared in the information packet; and

an inverted file entry, to indicate to a terms inverted file entry.

18. (Withdrawn) The method of claim 2 wherein the information packet comprises content selected from the group consisting of: text, audio, video, multimedia, and executable code streaming media.

19. (Withdrawn) The method of claim 1 further comprising compensating for time differences resulting from a reception of an information stream from a distinct geographical location.
20. (Withdrawn) The method of claim 1 further comprising compensating for time differences resulting from a reception of an information stream relating to an event that occurs at a distinct geographical location.
21. (Withdrawn) The method of claim 1 wherein the current reception pattern reflects the reception of the keyword during a test period.
22. (Withdrawn) The method of claim 1 wherein the current reception pattern reflects the reception of the keyword during at least two test periods.
23. (Withdrawn) The method of claim 22 wherein the at least two test periods at least partially overlap.
24. (Withdrawn) The method of claim 22 wherein each of the at least two test periods is characterized by a corresponding current reception pattern.
25. (Withdrawn) The method of claim 24 wherein determining a relevancy of the keyword comprises comparisons between each corresponding current reception pattern and the reference reception pattern.
26. (Withdrawn) The method of claim 25 wherein determination of relevancy is responsive to a combination of at least one comparison.
27. (Withdrawn) The method of claim 22 wherein the reference reception pattern reflects the reception of the keyword during a time period that is much longer than each of the test periods.

28. (Withdrawn) The method of claim 1 wherein determining the relevancy of the keyword comprises attaching a relevancy level to the keyword.
29. (Withdrawn) The method of claim 27 wherein the relevancy is defined by a relevancy level threshold.

Claim 30 (Canceled).

31. (Withdrawn-Currently Amended) In a computing environment running on a computer platform utilized as a central server system, a method of calculating the relevancy of a keyword is operating to allow users of client systems connectable thereto to receive indications about the relevancy of the keyword in response to the reception of a real time term by the central server system, the method comprising:

providing a relevancy determination unit comprising:

a first interface adapted to receive and receives information relating to a reception of a keyword,

a processor adapted to calculate and calculates a current reception pattern and a previous reception pattern in response to the reception of information relating to the reception of the keyword and to attach and attaches a relevancy level to the keyword, wherein the relevancy level is defined by a relevancy level threshold, and

a storage unit, coupled to the first interface and the processor, adapted to store and stores the current reception pattern, the previous reception pattern and information relating to the reception of the keyword, wherein the relevancy determination unit is adapted to determine and determines the relevancy of the keyword; and

utilizing said relevancy determination unit to:

determine the keyword,

extract a real time term from a currently received information stream and/or information packet,

update the current reception pattern of the keyword in response to a comparison between the extracted real time term and the keyword, and determine a relevancy of the keyword in response to a comparison between the current reception pattern and a reference reception pattern.

- 32. (Withdrawn) The method of claim 31 wherein the keyword is extracted from a client query.
- 33. (Withdrawn) The method of claim 31 wherein the keyword is extracted from an alert criterion of a client.
- 34. (Withdrawn) The method of claim 31 further comprising updating at least one client as to the relevancy of the keyword.
- 35. (Withdrawn) The method of claim 31 further comprising estimating a flow pattern of the received information stream to generate an estimated flow pattern.
- 36. (Withdrawn) The method of claim 35 wherein the current reception pattern of the keyword is further responsive to the estimated flow pattern of the received information stream.
- 37. (Withdrawn) The method of claim 35 wherein estimating the flow pattern comprises monitoring the reception of a flow keyword.
- 38. (Withdrawn) The method of claim 37 wherein the flow keyword comprises a commonly used word.
- 39. (Withdrawn) The method of claim 31 wherein the information stream or the information packet comprises content selected from the group consisting of: text, audio, video, multimedia, and executable code streaming media.



- 40. (Withdrawn) The method of claim 31 further comprising compensating for time differences resulting from a reception of an information stream from a distinct geographical location.
- 41. (Withdrawn) The method of claim 31 further comprising compensating for time differences resulting from a reception of information stream relating to an event that occurs at a distinct geographical location.
- 42. (Withdrawn) The method of claim 31 wherein the current reception pattern reflects the reception of the keyword during a test period.
- 43. (Withdrawn) The method of claim 31 wherein the current reception pattern reflects the reception of the keyword during at least two test periods.
- 44. (Withdrawn) The method of claim 43 wherein the at least two test periods at least partially overlap.
- 45. (Withdrawn) The method of claim 44 wherein each of the at least two test periods is characterized by a corresponding current reception pattern.
- 46. (Withdrawn) The method of claim 45 wherein determining the relevancy of the keyword comprises comparisons between each corresponding current reception patterns and between the reference reception pattern.
- 47. (Withdrawn) The method of claim 46 wherein the determination of relevancy is responsive to a combination of at least one comparison.
- 48. (Withdrawn) The method of claim 43 wherein the reference reception pattern reflects the reception of the keyword during a time period that is much longer than each of the test periods.

49. (Withdrawn) The method of claim 31 wherein determining the relevancy of the keyword comprises attaching a relevancy level to the keyword.
50. (Withdrawn) The method of claim 49 wherein the relevancy level is defined by a relevancy level thresholds.

Claim 51 (Canceled).

52. (Currently Amended) A relevancy determination unit comprising:  
a first interface adapted to receive and receives information relating to a reception of a keyword;  
a processor adapted to calculate and calculates a current reception pattern and a previous reception pattern in response to the reception of information relating to the reception of the keyword and to attach and attaches a relevancy level to the keyword, wherein the relevancy level is defined by a relevancy level threshold; and  
a storage unit, coupled to the first interface and the processor, adapted to store and stores the current reception pattern, the previous reception pattern and information relating to the reception of the keyword,  
wherein the relevancy determination unit is adapted to determine and determines the relevancy of the keyword.
53. (Currently Amended) The relevancy determination unit of claim 52 wherein the processor is operable to determine and determines the relevancy of the keyword in response to a comparison between the current reception pattern and a reference reception pattern.
54. (Currently Amended) The relevancy determination unit of claim 52 further adapted to receive and receives a keyword extracted from a client query.

55. (Currently Amended) The relevancy determination unit of claim 52 wherein the first interface is coupled to a search engine to receive and receives a term extracted from a client query.
56. (Currently Amended) The relevancy determination unit of claim 52 further adapted to receive and receives a keyword extracted from an alert criterion.
57. (Currently Amended) The relevancy determination unit of claim 52 wherein the first interface is coupled to an alert module to receive and receives a term extracted from an alert criterion.
58. (Currently Amended) The relevancy determination unit of claim 52 further operable to update and updates at least one client as to the relevancy of the keyword.
59. (Currently Amended) The relevancy determination unit of claim 52 wherein the processor is further adapted to estimate and estimates a flow patterns of a received information stream.
60. (Previously Presented) The relevancy determination unit of claim 52 wherein the current reception pattern of the keyword is further responsive to the estimated flow pattern of a received information stream.
61. (Currently Amended) The relevancy determination unit of claim 59 wherein the processor is further adapted to monitor and monitors a reception of the flow keyword.
62. (Previously Presented) The relevancy determination unit of claim 61 wherein the flow keyword comprises a commonly used word.

63. (Previously Presented) The relevancy determination unit of claim 59 wherein the information stream comprises content selected from the group consisting of text, audio, video, multimedia, and executable code streaming media.
64. (Currently Amended) The relevancy determination unit of claim 52 further configured to compensate and compensates for time differences resulting from a reception of an information stream from a distinct geographical location.
65. (Currently Amended) The relevancy determination unit of claim 52 further adapted to be coupled and is coupled to a time zone unit to compensate for time differences resulting from a reception of an information stream from a distinct geographical location.
66. (Currently Amended) The relevancy determination unit of claim 52 further configured to compensate and compensates for time differences resulting from a reception of an information stream relating to an event that occurs at a distinct geographical location.
67. (Currently Amended) The relevancy determination unit of claim 52 further adapted to be coupled and is coupled to a time zone unit to compensate for time differences resulting from a reception of an information stream relating to an event that occurs at a distinct geographical location.
68. (Previously Presented) The relevancy determination unit of claim 52 wherein the current reception pattern reflects the reception of the keyword during a test period.
69. (Previously Presented) The relevancy determination unit of claim 52 wherein the current reception pattern reflects the reception of the keyword during at least two test periods.

70. (Previously Presented) The relevancy determination unit of claim 69 wherein the at least two test periods at least partially overlap.
71. (Original) The relevancy determination unit of claim 69 wherein each of the at least two test periods is characterized by a corresponding current reception pattern.
72. (Currently Amended) The relevancy determination unit of claim 71 further adapted to compare and compares between each corresponding current reception pattern and the reference reception pattern.
73. (Currently Amended) The relevancy determination unit of claim 72 further adapted to determine and determines relevancy responsive to a combination of the at least one comparison.
74. (Previously Presented) The relevancy determination unit of claim 69 wherein the reference reception pattern reflects the reception of the keyword during a time period that is much longer than each of the test periods.

Claims 75-76 (Canceled).

77. (Currently Amended) A system for receiving and processing a real time term, the system comprising:
- a search engine, adapted to receive and process and receives and processes an information stream and/or an information packet and to provide and provides an indication reflecting at least one match between a query provided by a client and a real time term extracted from the information stream and/or information packet; and
  - a relevancy determination unit, coupled to the search engine, adapted to receive and receives the indication and to determine and determines whether the real time term matches a keyword; and

at least one module selected from the group of modules consisting of:

a message coordinator module adapted to coordinate and coordinates a handling of a plurality of information packets,

a message buffer adapted to temporarily hold and temporarily holds the plurality of information packets,

a message filter module adapted to filter and filters a plurality of information packets according to predefined rules,

a term extractor module adapted to parse and stem and parses and stems a plurality of information packets,

a terms filter adapted to exclude and excludes a real time term according to predefined rules,

a queries coordinator module adapted to coordinate and coordinates the processing of a client query,

a query-term extractor adapted to parse and stem and parses and stems an incoming query to extract and process and extracts and processes an operative query-term, and

a query-term filter adapted to exclude and excludes a specific query-term in a predefined manner,

wherein the relevancy determination unit comprises: a first interface adapted to receive and receives information relating to a reception of the keyword; a processor adapted to calculate and calculates a current reception pattern and a previous reception pattern in response to the reception of information relating to the reception of the keyword and to attach and attaches a relevancy level to the keyword; and a storage unit, coupled to the first interface and the processor, adapted to store and stores the current reception pattern, the previous reception pattern and information relating to the reception of the keyword,

wherein the system is adapted to receive and process and receives and processes the real time term.

Claim 78 (Canceled).

79. (Previously Presented) The system of claim 78 wherein the storage unit is a term index data structure.
80. (Currently Amended) The system of claim 79 wherein the term index data structure is adapted to hold and holds an indexed real time term and an information packet identifier.
81. (Currently Amended) The system of claim 80 wherein the term index data structure further comprises:
- a terms hash table ~~to holding~~ holding extracted, filtered and processed terms;
  - a terms inverted file pointed to by said terms hash table that holds a terms inverted entry map;
  - a messages hash table ~~to holding~~ holding an information packet identification;
  - a messages data table ~~to holding~~ holding an information packet data; and
  - a channel map ~~to holding~~ holding a list of information sources and a related number of index terms of said information sources.
82. (Previously Presented) The system of claim 81 wherein the terms inverted file further comprises:
- a terms inverted entries map table;
  - a total instances of said term;
  - a number of information sources containing said term; and
  - a last modification time of said term.
83. (Previously Presented) The system of claim 82 further comprising:
- a message terms key map;
  - an information source identification; and
  - an information packet time of arrival.

84. (Previously Presented) The system of claim 83 wherein the message terms key map further comprises:
- a pointer to said terms inverted file;
  - an instances number of said term in said information packet; and
  - a pointer to said inverted file entry related to said term.
85. (Previously Presented) The system of claim 84 wherein the terms inverted entries map further comprises:
- an information source identification;
  - an instances number of said term in said information source; and
  - a time of last appearance of said term in said information source.
86. (Currently Amended) The system of claim 77 further comprising at least one of the following means:
- an adding means to adding adding control data to said information packet;
  - a filtering means to filtering a plurality of information packets;
  - a processing means for said real time term to adding adding control information to said real time term; and
  - a term filtering means for the real time terms to generate generating a filtered real time term.
87. (Currently Amended) The system of claim 86 wherein the search engine is adapted to extract and extracts a real time term out of the plurality of information packets by parsing and stemming the plurality of information packets; and wherein the term filtering means is adapted to (a) discard and discards said term constructed of a one-letter word; (b) discard and discards said term constructed of a frequently used word; (c) discard and discards said term constructed of a stop-word; and (d) discard and discards said terms constructed of a predefined word.



88. (Previously Presented) The system of claim 87 wherein the control data comprises an information packet identification, an information source identification and a time of arrival.
89. (Currently Amended) The system of claim 77 further adapted to receive and receives an information packet, to store and stores the information packet with an associated packet identifier in an information packet storage means, to store and stores real time term information representative of a reception of at least one real time term extracted from the information packet and to link and links between the stored information packet and the real time term information.
90. (Currently Amended) The system of claim 89 further adapted to delete and deletes an information packet and to delete and deletes the linked real time term information.
91. (Currently Amended) The system of claim 89 further adapted to store and stores the information packet in a messages hash, and the linked real time term information in a terms hash.
92. (Currently Amended) The system of claim 89 wherein the real time term information comprises at least one information field selected from the group consisting of:
- a last modification time field, ~~to indicate~~ indicating a most recent time in which the real time term was received;
  - a number of channels containing term field, ~~to indicate~~ indicating a number of information sources that provided the real time term;
  - a total instances field, ~~to indicate~~ indicating a number of times the real time term was provided; and
  - a terms inverted entries map, comprising a plurality of terms inverted file entries, each entry holds information representative of a reception of the real time term from a single information source.

93. (Currently Amended) The system of claim 92 wherein each inverted file entry comprises at least one field selected from the group consisting of:
- a channel identifier, ~~to identify~~ identifying the information source that provided the real time term;
  - an instances number, ~~to indicate~~ indicating a number of times the real time term was provided by the information source; and
  - a time of last appearance, ~~to indicate~~ indicating a most recent time in which the real time term was received from an information source.
94. (Currently Amended) The system of claim 92 further adapted to associate and associates each information packet to a message terms key map comprising a plurality of message characteristic entries, each message characteristic entry associated to a real time term extracted from the information packet, said message characteristic entry comprising at least one field selected from the group consisting of:
- a term inverted file, ~~to pointing~~ to the term extracted information;
  - an instance number, ~~to indicate~~ indicating a number of times said real time term appeared in the information packet; and
  - an inverted file entry, ~~to pointing~~ to a terms inverted file entry.
95. (Currently Amended) The system of claim 77 further adapted to insert and inserts a real time term into a terms hash table and into a terms inverted file; to insert and inserts an information source identification to a terms inverted entry map table in said terms inverted file, said information source having provided the real time term; to insert and inserts information packet data in a messages hash table; to insert and inserts the real time term from said information packet to a messages data table; to increase and increases a value of instances in said messages data table by one; and to update and updates a value of the information source identification in said message data table.

96. (Currently Amended) The system of claim 95 further adapted to extract and extracts a real time term and to perform and performs at least one operation selected from the group consisting of:
- increase a value of total instances in said terms inverted file;
  - update a value of last modification time in said terms inverted file;
  - increase a value of instances number in said inverted entry map table associated with said information source identification in said terms inverted file;
  - and
  - update a value of message time in said messages data table.
97. (Currently Amended) The system of claim 77 further adapted to delete and deletes an information packet, and to perform and performs at least one operation selected from the group consisting of:
- receive an information packet identification, whereas the terms extracted from the information packets are to be deleted;
  - read an information packet identification from a messages hash table in a terms index data structure;
  - obtain a relevant entry of said real time terms belonging to said information packet in a messages data table; and
  - access a term inverted file for each terms entry pointed to said terms inverted file.
98. (Currently Amended) The system of claim 77 further comprising an alert module to match and matches between an alert term and the real time term.
99. (Withdrawn) The method of claim 1 wherein the current flow pattern is responsive to at least one weight factor associated to at least one source of received information stream.

100. (Withdrawn) The method of claim 31 wherein the current flow pattern is responsive to at least one weight factor associated to at least one source of received information stream.
101. (Currently Amended) A system for receiving and processing a real time term, the system comprising:
- an alert module, adapted to receive and process and receives and processes an information stream and/or information packet and to provide and provides an indication reflecting at least one match between at least one alert criterion provided by a client and real time terms extracted from the information stream and/or information packet; and
  - a relevancy determination unit, coupled to the alert module, adapted to receive and receives the indication and to determine and determines whether the real time term matches a keyword,
- wherein the relevancy determination unit comprises: a first interface adapted to receive and receives information relating to a reception of a keyword; a processor adapted to calculate and calculates a current reception pattern and a previous reception pattern in response to the reception of information relating to the reception of the keyword and to attach and attaches a relevancy level to the keyword, wherein the relevancy level is defined by a relevancy level threshold; and a storage unit, coupled to the first interface and the processor, adapted to store and stores the current reception pattern, the previous reception pattern and information relating to the reception of the keyword,
- wherein the system is adapted to receive and process and receives and processes the real time term.